

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 6,845,191 B1  
APPLICATION NO. : 10/661991  
DATED : January 18, 2005  
INVENTOR(S) : Xie et al.

7  
Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Cover Page,

Item (54), after "DIVISION" change "MULTIPLIED" to --MULTIPLEXED--

Column 1,

Line 19, after "optical" change "filers" to --filters--

Line 31, change "different portion," to --different portions,--

Line 50, change "processes" to --process--

Line 57, change "Battening" to --flattening--

Column 2,

Line 20, before "dispersion" insert --the--

Line 21, change "filter" to --filters--

Line 21, after "OC-192" change "signal" to --signals--

Column 3,

Line 30, after "will become" change "ore" to --more--

Line 40, change "dispersions profiles" to --dispersion profiles--

Column 4,

Line 36, change "EMBODIMENT" to --EMBODIMENTS--

Line 44, after "mux/demux can" insert --,--

Column 5,

Line 30, after "delay path" change "with" to --within--

Line 53-54, change "Others of the cells," to --Other cells,--

Line 54, after "harmonic cell(s)" insert --,--

Line 60, after "of the cells" insert --,--

Line 63, change "GHzThe" to --GHz. The--

Line 64, after "paths in a filter" remove ",",

Column 6,

Line 5, change " $L_1$  and  $L_1$ " to -- $L_1$  and  $L_j$ --

Line 6, after "substage" insert --,--

Line 7, after "cells" remove ",",

Line 9, after "cell" insert --,--

Line 40, change "theft" to --the first--

Line 42, after "dispersion" change "in" to --within--

Line 43, after "signal integrity" insert --within--

Line 49, change "FIGS. 2A-8" to --FIGS. 2A-B--

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

*Note*  
PATENT NO. : 6,845,191 B1  
APPLICATION NO. : 10/661991  
DATED : January 18, 2005  
INVENTOR(S) : Xie et al.

7  
Page 2 of 8

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 7,

Line 2, change "Cb 9-Ch 13," to --Ch 9-Ch 13,--  
Line 3, after "the vertical" change "was" to --axis--  
Line 37, change "380° to 720°" to --360° to 720°--  
Line 45, after "even channels" change "experience" to --experiencing--  
Line 53, after "retardations of" remove "the"

Column 8,

Line 6, after "flat line response" insert --,  
Line 7, change "stop bends" to --stop bands--  
Line 10, change "sign diagrams" to --signal diagrams--  
Line 14, change "fist and slow pats" to --fast and slow paths--  
Line 22, after "in this example" insert --,  
Line 54, after "in this example" insert --,

Column 9,

Line 25, change "Supposed" to --Superimposed--  
Line 58, before "port 136" change "renaming" to --remaining--

Column 10,

Line 9, after "Path 516 would" remove "in"  
Line 34, before "cell 570." change "with" to --within--  
Line 41, after "The couplers" remove "may"  
Line 51, change "sub-stages" to --sub-stage's--  
Line 58, after "stopbands" remove "of"  
Line 65, change "do-interleaved" to --de-interleaved--

Column 11,

Line 10, after "couple would" remove "of"  
Line 37, before "be fabricated" change "ma" to --may--  
Line 38, after "dielectric" change "coat" to --coatings--  
Line 42, change "filters 630 and 66." to --filters 630 and 660.--

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

Note

PATENT NO. : 6,845,191 B1  
APPLICATION NO. : 10/661991  
DATED : January 18, 2005  
INVENTOR(S) : Xie et al.

7  
Page 3 of 4

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 12,

Line 4, change "fist path," to --fast path,--  
Line 21, after "Where the cell" change "if" to --is--  
Line 30, change "two filter calls," to --two filters cells,--  
Line 30, change "serial coupled" to --serially coupled--  
Line 31, between "Each" and "serially" insert the following missing line:  
--cell includes a pair of delay paths. Filter 660 also includes two  
filter cells 670, 680--  
Line 35, change "Del" to --Delay--  
Line 54, change "sub-stages" to --sub-stage's--  
Line 61, after "stopbands" remove "of"

Column 13,

Line 8, after "half waveplate" insert --,  
Line 10, after "polarization vector" remove " ,"  
Line 13, after "amount  $2\Phi$ " insert --,  
Line 16, after "full waveplate" insert --,  
Line 17, change "polarized fight" to --polarized light--  
Line 19, after "polarization vector" remove " ,"  
Line 22, after "FIGS. 7A-D" insert --,  
Line 62, after "The linearly" change "polar" to --polarized--

Column 14,

Line 15, before "by waveplates" change "polarized" to --linearized--  
Line 25, before "the incident wavelength." remove "A"  
Line 28, change "optical bean" to --optical beam--  
Line 63, change "Light transit" to --Light transmitted--

Column 15,

Line 4, change "realigns" to --re-aligns--  
Line 15, change "beam splitter 134" to --beam splitter 1134--  
Line 21, after "beam splitter" change "are" to --is--  
Line 23, change "fist coupler" to --first coupler--  
Line 24, change "corresponded" to --correspond--  
Line 35, after "two pairs of" change "prism." to --prisms.--  
Line 35, change "block 110" to --block 1110--  
Line 36, change "beam splitter 114" to --beam splitter 1114--  
Line 50, change "exterior surfs" to --exterior surfaces--  
Line 54, change "second block 130." to --second block 1130.--

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 6,845,191 B1  
APPLICATION NO. : 10/661991  
DATED : January 18, 2005  
INVENTOR(S) : Xie et al.

7  
Page 4 of 4

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 16,

Line 35, change "vectors 156-1158." to --vectors 1156-1158.--

Line 37, after "center wavelengths" insert --,

Line 62, change "reflectors 1112 and 1130" to --reflectors 1112 and 1132--

Column 17,

Line 12, change "within an." to --within an--

Line 48, change "The cell 1102" to --The cell 1106--

Line 67, before "either delay path" remove "the"

Column 18,

Line 10, change " $\theta_{r1}$  and  $\theta_{r1}$ " to --  $\theta_{T1}$  and  $\theta_{R1}$  --

Line 40, change "component" to --components--

Line 41, before "a net change" insert --in--

Line 50, change "is shown is cleaved" to --is shown cleaved--

Column 19,

Line 28, change "are rennin" to --are realized--

Line 43, change "cell 100" to --cell 1100--

Line 46, change "cell 100" to --cell 1100--

Column 20,

Line 9, change "polarization axis" to --polarization axes--

Line 27, after "delay paths" insert --,

Line 38, change "pa length" to --path length--

Line 42, after "refraction "n"" insert --of--

Line 46, after "a vacuum" insert --,

Line 62, change " $L_{12}$ - $L_{22}$ " to -- $L_{12}$  and  $L_{22}$ --

Column 21,

Line 3, change "follow" to --following--

Line 37, change "optical p length" to --optical path length--

Line 49, change " $L_i$  and  $L_i$ " to --  $L_i$  and  $L_j$  --

Line 49, change "path length" to --path lengths--

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 6,845,191 B1  
APPLICATION NO. : 10/661991  
DATED : January 18, 2005  
INVENTOR(S) : Xie et al.

7  
Page 5 of 11

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 22,

Line 10, change "the bean" to --the beam--  
Line 19, change "angle  $\Phi_1$ " to -- angle  $\Phi_2$ --  
Line 21, change "shows the" to --shows both the--  
Line 22, change "vectors,  $P_2$ ,  $S_2$ " to --vectors  $P_2$ ,  $S_2$ --  
Line 34, change " $2^1$  or 4" to -- $2^2$  or 4--  
Line 36, change "the fit cell" to --the first cell--  
Line 45, change " $1^{st}$  to 4<sup>th</sup> paths" to -- $1^{st}$  to 4<sup>th</sup> paths--  
Line 61, change "optical stream" to --optical streams--  
Line 63, change "optical stream" to --optical streams--  
Line 65, change "can substantially" to --can be substantially--  
Line 66, change "45 degree" to --45 degrees--  
Line 67, change "(45+22.5) degree." to --(45 + 22.5) degrees.--

Column 23,

Line 1, change "and a cell" to --and a 2<sup>nd</sup> cell--  
Line 21, change "C.R. Henry" to --C.H. Henry--  
Line 29, change "Passive Thermal" to --Passive Thermal--  
Line 32, change "mux/demux" to --mux/demux.--  
Line 59, change "across a rage" to --across a range--

Column 24,

Line 9, change "dosed loop" to --closed loop--  
Line 10, change "any increase" to --may increase--  
Line 14, change "which nuke" to --which make--  
Line 34, change "p," to --paths,--  
Line 56, change " $a_i$  and  $a_4$ " to -- $\alpha_i$  and  $\alpha_j$ --  
Line 58, change "respective" to --respectively--

Column 25,

Line 15, change "Row 7" to --Row 4--  
Line 16, change "thermal expansion a" to --thermal expansion  $\alpha$ --

Column 28,

Line 6, change "fat top profile" to --flat top profile--  
Line 7, change "FIG." to --FIGS.--  
Line 14, change "well know" to --well known--  
Line 17, change "echausive" to --exhaustive--  
Line 18, change "disclosed:" to --disclosed.--

CORRECTIONS TO COLUMN 25, lines 16-19

THRU COLUMN 27, line 59 on attached page

# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

PATENT NO. : US 6,845,191 B1

DATED : Jan 18, 2005

INVENTOR(S) : Xie et al.

Page 6 of 7

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lines 18-19, change "components" to --component--  
 Line 22, change "forms 35 degree" to --forms a 35 degree--  
 Line 23, change "to bottom surface" to --the bottom surface--  
 Line 25, change "width is" to --width in--  
 Line 49, after "are increased" insert --,  
 Line 60, change "with the sequence." to --within the sequence.--  
 Line 63, change "beams 1160-1162" to --beams 1160-1162--

### Column 26,

Line 15, after "pair  $\theta_{R2}$ " insert --,  
 Line 29, after "beams 1160-1162" insert --,  
 Line 36, change "FIG. 10A" to --FIG. 10A.--  
 Line 39, change "delay path" to --delay path.--  
 Line 41, change "propagation path" to --propagation path.--  
 Line 56, change " $\theta_{R1}$  and  $\theta_{r1}$ " to -- $\theta_{R1}$  and  $\theta_{T1}$ --  
 Line 58, before "Equations 4-5," remove [equations]  
 Line 59, change "and with  $\theta_{r1}$ " to --and with  $\theta_{T1}$ --  
 Line 65, change "transmission A)" to --transmission (T)--

### Column 27,

Line 6, change " $L_1$  and  $L_1$ " to -- $L_1$  and  $L_2$ --  
 Line 8, after "paths  $\theta_{R1}$ " remove [,]  
 Line 9, change "and  $\theta_{R1}$ ." to --and  $\theta_{T1}$ ."  
 Line 11, after "100 GHz" insert --,  
 Line 17, after "FIG. 10A" insert --,  
 Line 18, after "polarized light" remove [that]  
 Line 34, change " $\theta_{R1}, \theta_{R2}$ ," to -- $\theta_{R1}, \theta_{R2}$ --  
 Line 48, after "corresponding path" insert --,  
 Line 57, after "filter transform" insert --,  
 Line 59, after "the example" insert --is--

MAILING ADDRESS OF SENDER (Please do not use customer number

Eric L. Maschoff  
 WORKMAN NYDEGGER  
 1000 Eagle Gate Tower  
 60 East South Temple  
 Salt Lake City, Utah 84111

PATENT NO. US 6,845,191 B1

No. of additional copies



0

AUG 07 2006

UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 6,845,191 B1  
APPLICATION NO. : 10/661991  
DATED : January 18, 2005  
INVENTOR(S) : Xie et al.

7 7  
Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 29,

Line 51, change "process optical signals," to --processes optical signals,--

Column 30,

Line 53, change "process optical signals" to --processes optical signals,--

Column 31,

Line 19, change "comb filter function;" to --comb filter function;--

This certificate supersedes certificate of correction  
issued December 5, 2006.

Signed and Sealed this

FIFTH DAY OF DECEMBER 2006

Commissioner of Patents and Trademark